

**PREVENTION
OF
PERIODONTAL
DISEASES**

The initiating factor of periodontal disease is the *plaque bacteria*.

Prevention of gingivitis and periodontitis is based primarily on plaque and calculus control around the teeth.

The prevention or regular removal of plaque is the best method of avoiding periodontal disease.

Periodontitis is preceded by gingivitis

The inflamed gingiva showed *hyperemia* (red color) associated with *bleeding* either on brushing or spontaneously.

The gingival margin and the interdental papillae are usually *swollen* and *edematous* (shiny with loss of stippling).



In moderate cases *marked redness* with *frequent bleeding* may occur accompanied sometimes by *soreness and etching*.

If inflammation is persist for long period, ***over growth of connective tissue*** (rough and irregularly enlarged gingiva) may occur specially in the anterior region.



In more severe cases

destruction of the periodontal ligaments, resorption of the alveolar bone, pocket formation, loosening and tooth migration.



Causes of Periodontal Disease:

a) Local factors

1. The consistency of the diet

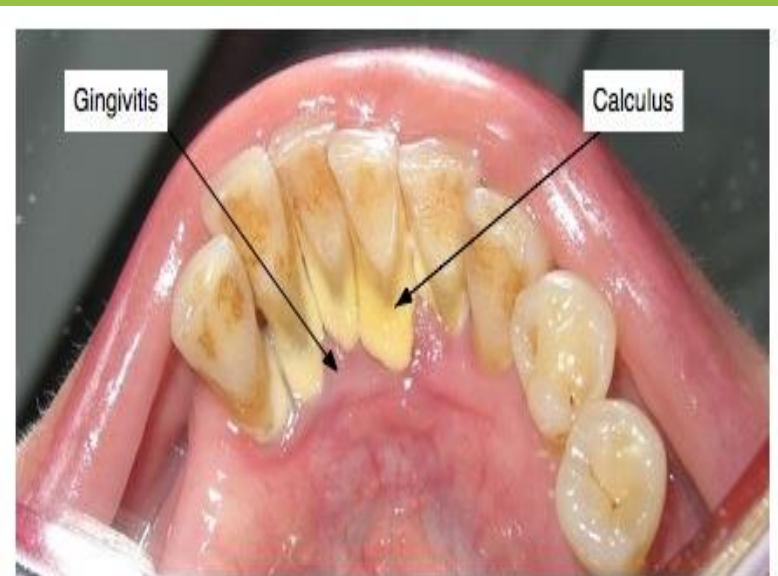
Soft foods are detrimental to the periodontium, because they do not afford functional stimulation, and they faster accumulation of food debris.



2. Calculus:

Its an abnormal hard stone-like concretion, varying in color from yellow to black, formed by calcification of dental plaque.

Formed of calcium phosphate and carbonate, food particles and organic matter.



3. Shedding of deciduous teeth and eruption of permanent teeth:

Gingivitis seen during the mixed dentition period.

The child will avoid chewing on a loose or painful tooth allowing food deposits.



4. **Untreated caries:** especially *interproximal* and *cervical* caries lead to impaction or lodgment of food debris.



5. Poorly contoured restorations and overhanging cervical edges



6. Occlusal abnormalities: e.g. crowding of teeth, open bite, proclined maxillary incisors, and incompetent lips, interfere with normal function and allowing food stagnation.



7. Early extraction of a first permanent molar: will prevent the normal cleansing effect of mastication and allow food stagnation around the opposite tooth.

8. Prosthetic and orthodontic appliances: it is a significant local irritating factor particularly when poorly fitted or incorrectly designed.



Systemic factors

I. Endocrinal disorders:

---*Diabetes* often increased inflammatory gingival response, particularly if there is neglected oral hygiene.

---At *puberty*, hormonal changes and temporary upset  swollen & hemorrhagic gingiva.

2. Drugs: certain drugs on long term may cause gingival alterations. The anticonvulsant drug '*Dilantin*' causes characteristic gingival hyperplasia starting at the interdental papillae and spreading over other areas too, occasionally completely covering the teeth.

In some cases the gum is rather firm and shows little tendency to bleed.





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3. Acute Fevers: as typhoid and measles, gingivitis may occur due to the concomitant poor oral hygiene. Gingiva improved on recovery from the fever.

4. Blood Dyscrasias: as agranulocytosis, leukaemia and purpura often exhibit gingival changes and these may even be the first symptoms.

5. Avitaminosis: particularly vitamin C (scurvy) and nicotinic acid deficiency.

Preventive Measures

i. Dental prophylaxis:

Calculus deposits cannot be removed by the patient.

Patients with a tendency to calculus deposits & gingivitis must receive dental prophylaxis every *3 to 4 months*.

Posterior bite-wing X-ray films should be taken at annual intervals and studied for any alveolar bone loss.

ii. Good oral hygiene:

Stressing from an early age, on the importance of good oral hygiene is valuable.

Also the importance of eating some hard, fibrous and fresh foods.



A. Tooth brushing:

The most recommended measure for the removal of food debris and plaque mechanically.

Methods of brushing are variable (vertical, horizontal, roll, circular to scrub method). None of them has been shown to be superior to others. The removal of plaque and debris depends upon the careful and correct application of any method.



a) Charter's method:

The end of the bristles are placed in contact with the enamel of the tooth surface and the gingival tissue with the bristles pointing *occlusally* at an angle of 45⁰.

Much lateral and downward pressure is then placed upon the brush and the brush is vibrated gently back and forth a millimeter or so.

This gentle vibratory procedure forces the ends of the bristles between the teeth and cleans the interproximal tooth surfaces very well. This technique also massages the interdental tissues as well.

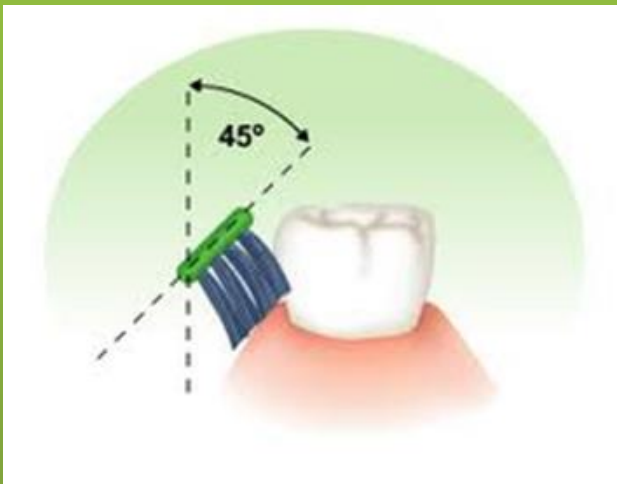


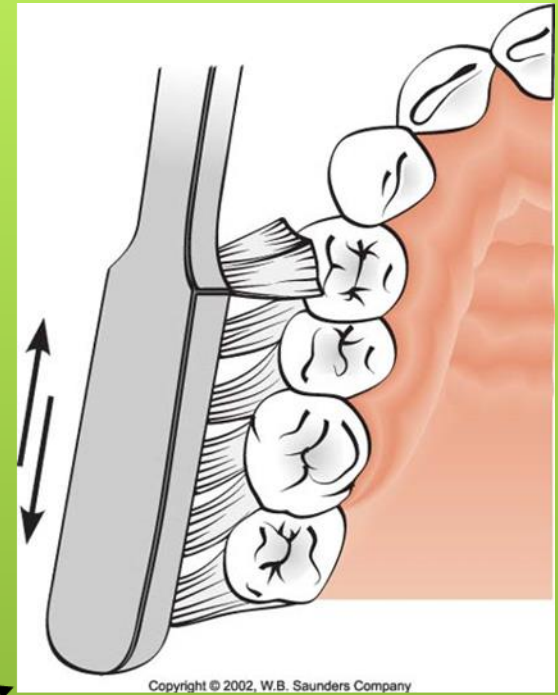
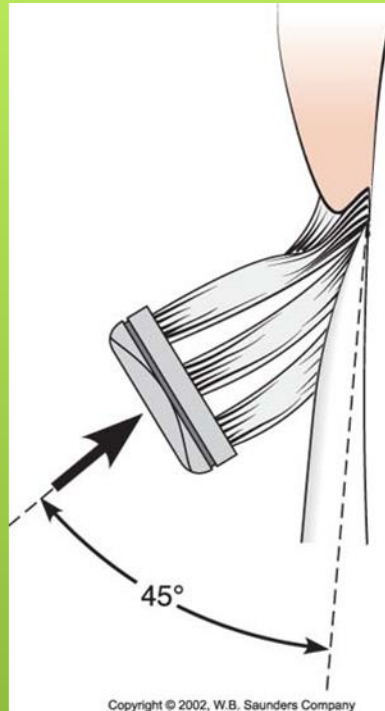
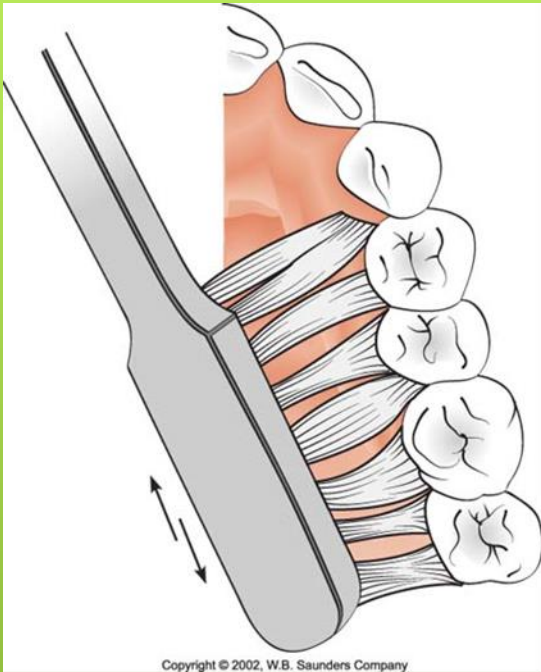
Charters method



b) Stiliman's method (Bass method):

The brush is placed in the same position as in roll method, except that it is nearer the crowns of the teeth. The handle is vibrated gently in a rapid but slight mesiodistal movement. This technique forces the bristles into the interproximal spaces and handle the teeth in that area very well. It also adequately massages the gingival tissues.





Bass method

As a final step of brushing, brush the dorsum of the tongue with brush. This will increase its circulation and removes bacteria and waste products that can cause fetid oris.

B. Interdental cleaners:

Dental floss, tooth picks, rubber tips, single tufted brush are recommended for cleaning areas inaccessible to the toothbrush.



III. Oral irrigation:

IV. Early -treatment of carious cavities:

To avoid gingival inflammation, caries should be treated as soon as a cavity is spotted.

Cervical cavities and interproximal cavities cause irritation of the neighboring gingival tissue, whereas occlusal cavity causes decreased function of the same side and results in the accumulation of debris.

The use of *bite wing films* in the early detection of interproximal lesions is advisable.

New restorations should be carefully inserted, contoured and polished to avoid food impaction and gingival damage.

Old restorations should be checked for improper contact, overhanging margins and defect at the tooth restoration junction line.

V. Early diagnosis and treatment of occlusal abnormalities:

VI. Treatment of Mouth breathing:

by *clearing the air passages* by surgical or medical or by orthodontic means as oral screen will eliminate the effect of repeated drying on the gingiva.

VII. Care of prosthetic, surgical or orthodontic appliances,

Good oral hygiene and cleaning the appliances to prevent debris stagnation of and traumatizing of soft tissues including the gingiva. It is suggested to relief the oral tissues by leaving dentures out at night.



VIII. Systemic diseases

will need medical attention in addition to local treatment means.